



Estimated glomerular filtration rate or eGFR, is a blood test that shows how well your kidneys are working. It helps doctors find kidney disease early, even when you feel well and have no symptoms. Finding kidney disease early gives you more time and more options to protect your kidney health.

### Measuring and estimating GFR

Getting an accurate GFR level is challenging because measured GFR (mGFR) is a complicated and lengthy process, which is impractical for both clinicians and patients. It is for this reason that healthcare professionals use a formula to estimate GFR (eGFR).

Reliable estimates of GFR are important for identifying kidney disease, which often has no symptoms until just before the kidneys fail. The standard way to estimate GFR is with a simple blood test that measures your creatinine levels.

Creatinine is a waste product that comes from the digestion of dietary protein and the normal breakdown of muscle tissue. Aside from CKD, creatinine levels can be affected by other factors including diet; muscle mass, which is the weight of your muscles; malnutrition; and other chronic illnesses.

### eGFR testing

Who should get an eGFR test?

- Your doctor may recommend an eGFR test if you:
  - Have diabetes
  - Have high blood pressure
  - Are overweight or have obesity

#### **eGFR**

Estimated  
Glomerular  
Filtration Rate



#### **Blood test**

Shows how well  
your kidneys filter  
(clean) your blood

### Why eGFR testing is done

Early-stage kidney disease doesn't usually cause symptoms, but your healthcare professional may recommend an eGFR test if you are at higher risk of developing kidney disease. CKD risk factors include:

- Diabetes
- High blood pressure
- Being overweight or obese
- Being over the age of 60
- Family history of kidney disease

Later stage CKD does cause symptoms. So, you may need an eGFR test if you have any of the following CKD symptoms:

- Urinating more or less often
- Itching
- Feeling tired
- Swelling in your arms, legs, or feet
- Muscle cramps
- Nausea and vomiting
- Loss of appetite

### Possible symptoms in later stages

Kidney disease often has no symptoms early. As it worsens, symptoms may include:

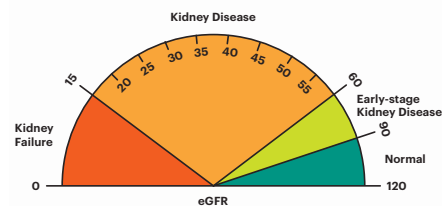
- Changes in urination
- Itching or feeling tired
- Swelling in the arms, legs, or feet
- Muscle cramps
- Nausea, vomiting, or loss of appetite
- Are age 60 or older
- Have a family history of kidney disease or kidney failure

## What to expect during the test

A healthcare professional will take a blood sample from a vein in your arm, using a small needle. After the needle is inserted, a small amount of blood will be collected into a test tube or vial. You may feel a little sting when the needle goes in or out. The test usually takes less than five minutes. There are typically no restrictions after blood is drawn for the test.

## Results

- eGFR of 90 or higher is in the normal range
- eGFR of 60–89 may mean early kidney disease
- eGFR of 15–59 may mean kidney disease
- eGFR below 15 may mean kidney failure



## Understanding your results

There are five stages of kidney disease. Your healthcare provider determines your stage of kidney disease based on the amount of kidney damage shown by your eGFR or mGFR. Now that you know your eGFR, find out your kidney disease stage in this table.

## Kidney disease stage and eGFR

| Stage | Description  | eGFR         | Kidney Function |
|-------|--|--------------|-----------------|
| 1     | Possible kidney damage (e.g., protein in the urine) with <b>normal</b> kidney function | 90 or above  | 90–100%         |
| 2     | Kidney damage with <b>mild loss</b> of kidney function                                 | 60 to 89     | 60–89%          |
| 3a    | <b>Mild to moderate</b> loss of kidney function  | 45 to 59     | 45–59%          |
| 3b    | <b>Moderate to severe</b> loss of kidney function                                      | 30 to 44     | 30–44%          |
| 4     | <b>Severe loss</b> of kidney function  | 15 to 29     | 15–29%          |
| 5     | <b>Kidney failure</b>  | Less than 15 | Less than 15%   |

## What to do next

Now that you know your eGFR and your stage of kidney disease, use this table to find questions to ask your healthcare professional at your appointments.

## Kidney disease risk factors

|  |                                  |
|--|----------------------------------|
|  | Diabetes                         |
|  | High blood pressure              |
|  | Overweight/obesity               |
|  | Over the age of 60               |
|  | Family history of kidney disease |

## Questions for your healthcare team

| If your kidney disease is in stage... |   |    |    |   |   | Ask your healthcare professional if you should...  |
|---------------------------------------|---|----|----|---|---|--|
| 1                                     | 2 | 3a | 3b | 4 | 5 |  |
| ✓                                     | ✓ | ✓  | ✓  | ✓ | ✓ | Test your urine because you have risk factors for kidney disease   |
|                                       | ✓ | ✓  | ✓  | ✓ | ✓ | Repeat your eGFR test in 3 months to check that your eGFR remains lower than 90                            |
|                                       | ✓ | ✓  | ✓  |   |   | Take medication that may help slow progression of kidney disease (such as ACEs, ARBs, or SGLT2 inhibitors) |
|                                       |   |    |    | ✓ | ✓ | Adjust any current medications due to reduced kidney function  |
|                                       |   | ✓  | ✓  | ✓ | ✓ | Get nutritional and dietary counseling to help support kidney function and overall health                  |
|                                       |   |    |    | ✓ | ✓ | Start seeing a kidney specialist (nephrologist)  |
|                                       |   |    |    | ✓ | ✓ | Learn more about end-stage kidney disease and treatment options  |
|                                       |   |    |    |   | ✓ | Be evaluated for a kidney transplant and be placed on a kidney transplant list                             |

For more information, contact the National Kidney Foundation

Toll-free help line: **855.NKF.CARES** or email: **nkfcares@kidney.org**